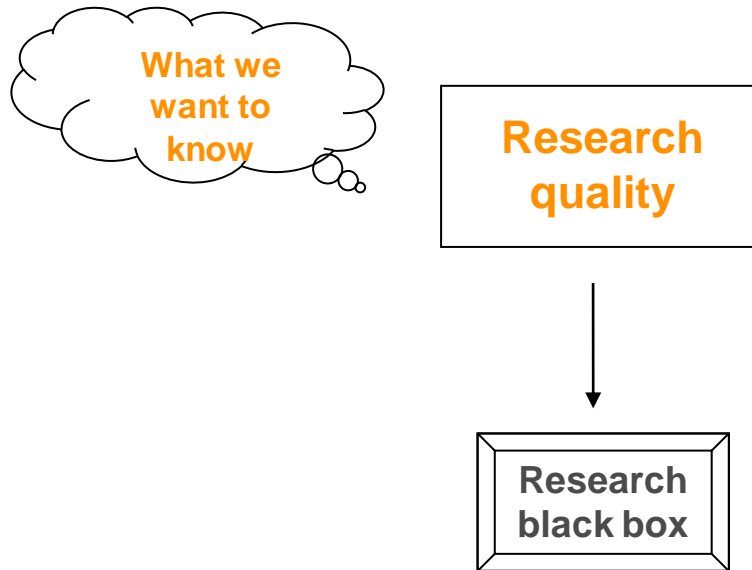


# SCIENTOMETRICS AROUND THE WORLD

Philip Purnell  
Ekaterinburg, February 2014

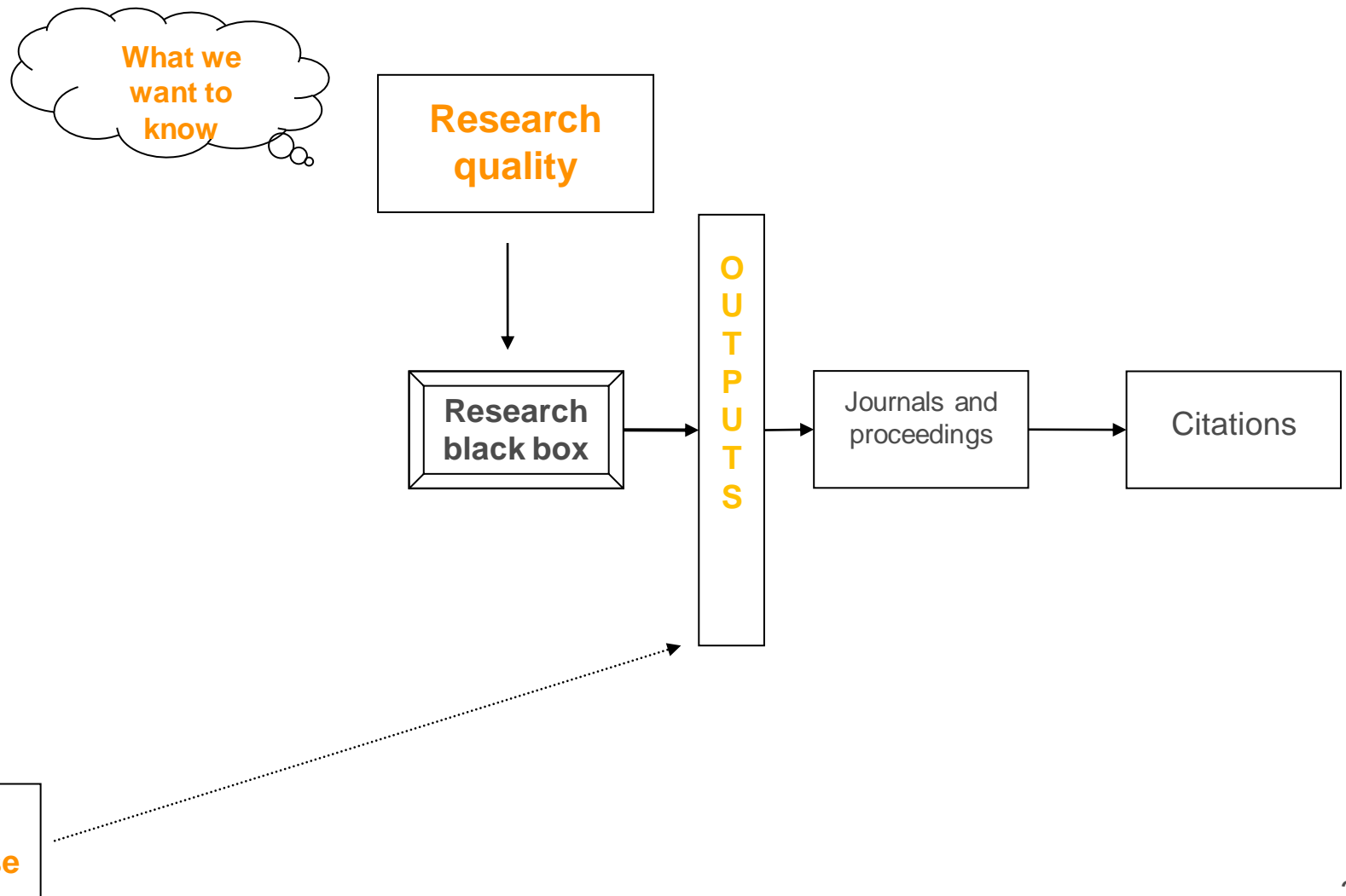
# Research policy and management is about 'more, better research'

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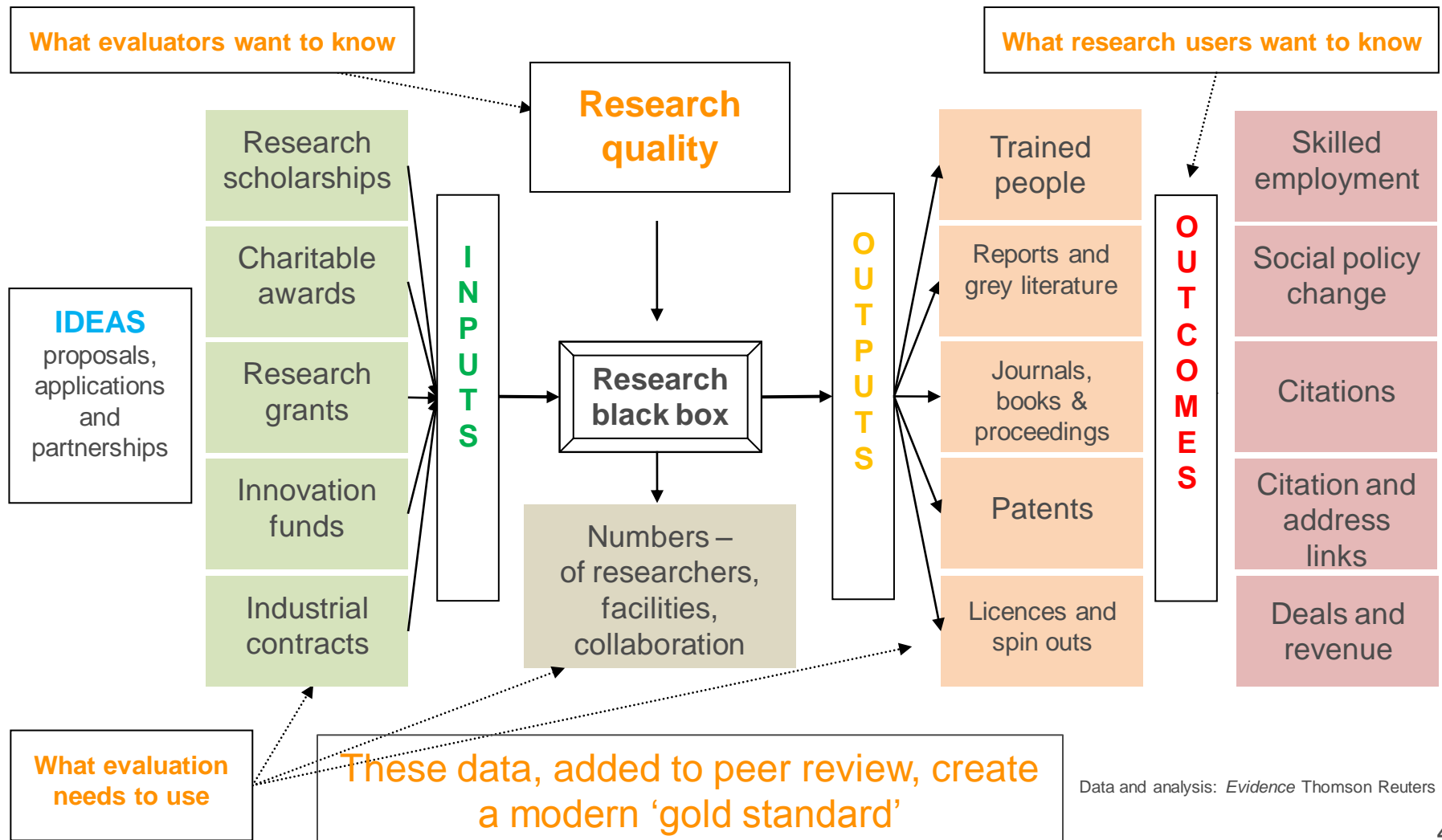


# Output data have underpinned quantitative research evaluation

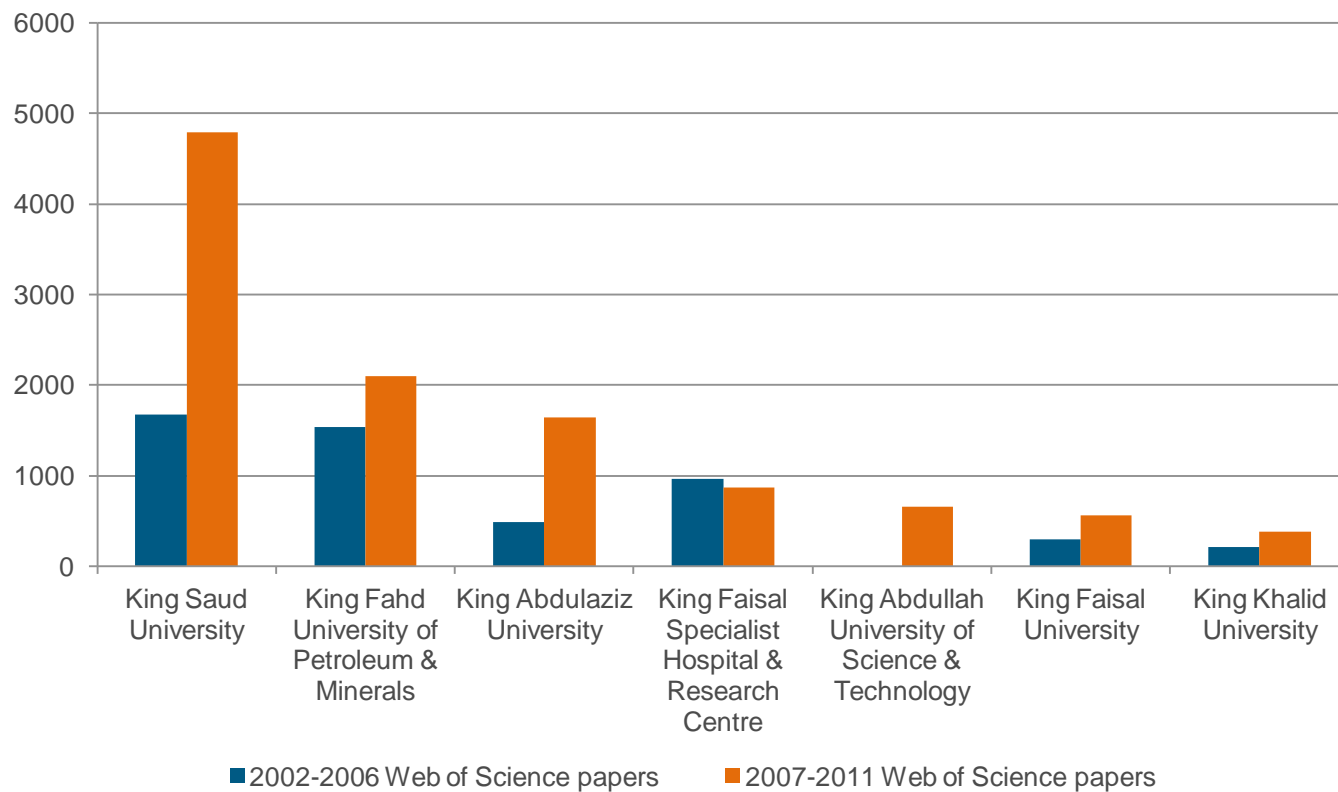
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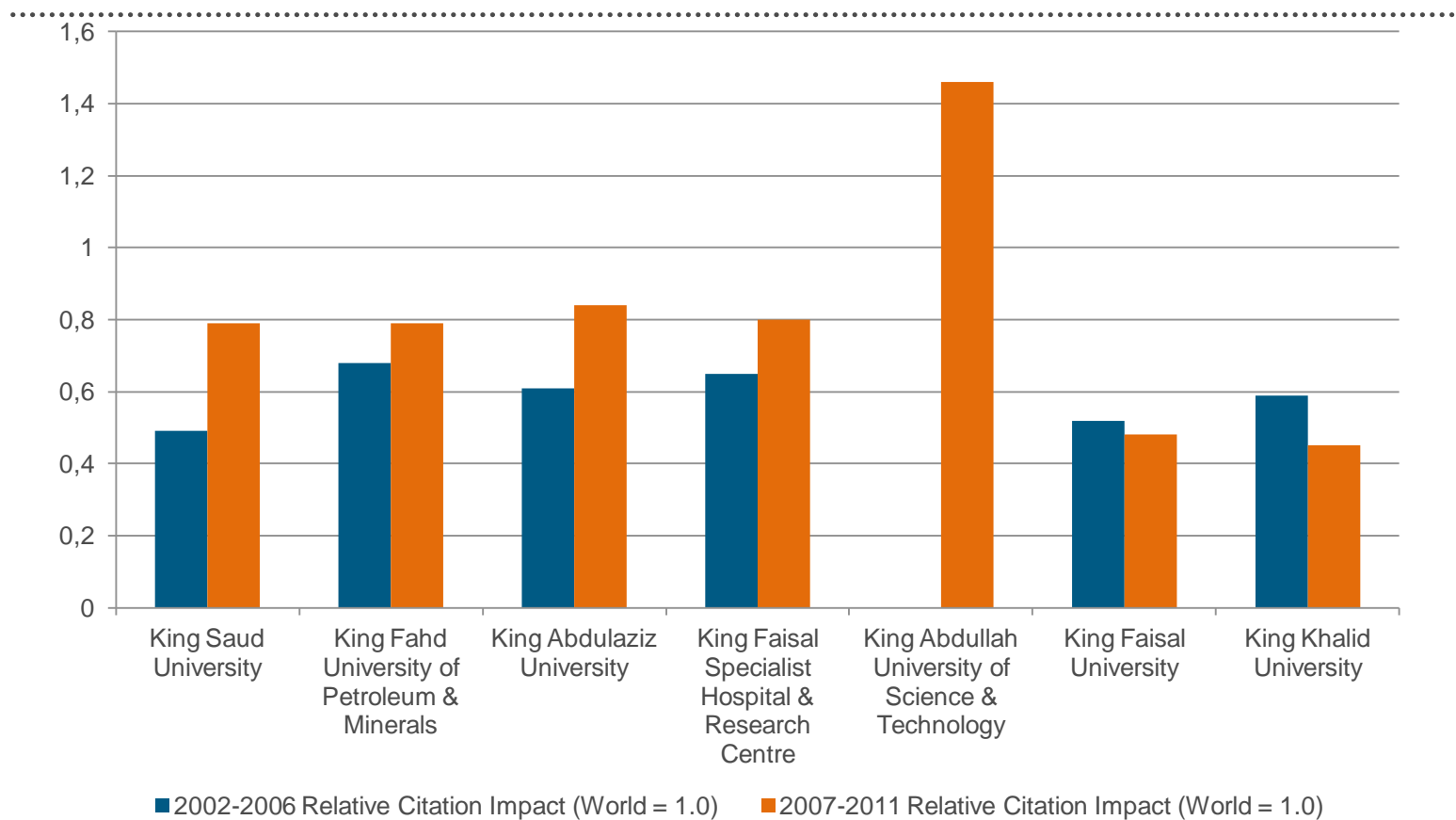
# You can now use comprehensive research management information



# SAUDI ARABIA



# SAUDI ARABIA



# SAUDI ARABIA

## TECHNICAL ANALYSIS OF PATENT ACTIVITY

Technical Category	Total Inventions	82	83	84	86	87	88	89	90	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11
Information Technology	155										1	1		3	4	2	6	1	5	5	2	8	2	4	15	16	16	56	8
Electronics & Communications Technology	152								1	1				3	2	4	6	3	7	3	4	11	5	8	12	8	20	43	10
Materials	141						1		1			1	2	1	2	6	5	3	9	1	9	4	7	4	5	9	18	40	9
Petrochemical Technology	161					1		1	1				2	1	5	5	4	4	10	3	8	4	5	7	9	11	24	39	12
Mathematics & Physics Technology	77	1	1							1						1	3	1	1	4	6	2	5	6	5	6	6	23	5
Medical & Health	89	1		1	1	2	1					2				1	2	1	1	2	3	1	4	2	12	15	17	17	3
Water Technology	57		1								1											1	2	3	1	7	9	17	14
Construction Technology	32							1				1	1								1					5	7	13	3
Mechanical Engineering	45	1	1			2	1				1				2	1	2				3	1			3	4	6	12	4
Energy Technology	38														1	3						2		3		4	6	12	5
Environment Technology	28													1	1	1					1	1		1		6	2	10	4
Biotechnology	34																	1	1	2	1	1	2		2	9	5	9	1
Agriculture Technology	24			1					1				2											1	3	2		9	4
Oil & Gas Technology	13	1	1						1									1		1		1		1			1	5	
Nanotechnology	21															2				2	6		1			3	2	4	
Transportation	13																	1			1			3	1	2		4	1
Agriculture	14			1					1				2							1				1	1	1		4	1
Miscellaneous, Personal Articles etc.	10			1																1						1		4	3
Aerospace	6																	1						2		1	1	1	

Analysis of patent documents associated with academic institutions in Saudi Arabia organised by major DWPI category

# UNITED KINGDOM

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## Analysis of data from the pilot exercise to develop bibliometric indicators for the REF

The effect of using normalised citation  
scores for particular staff characteristics

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HIGHER EDUCATION  
FUNDING COUNCIL *hefce* FOR ENGLAND



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# UNITED KINGDOM

Documents 1 - 20 of 58

Sort By: Percentile in Subject Area

Times Cited	Journal Expected Citations	Category Expected Citations	Percentile in Subject Area	Publication Year	Subject Area <a href="#">View Ranking</a>	Document Type <a href="#">View Ranking</a>	First Author <a href="#">View Ranking</a>	Journal <a href="#">View Ranking</a>	Document Title
<a href="#">38</a>	1.76	1.19	0.20	2012	<a href="#">PHYSIOLOGY</a>	REVIEW	SYLVESTER, JT <a href="#">et al.</a>	PHYSIOLOGICAL REVIEWS	<a href="#">HYPOXIC PULMONARY VASOCONSTRICTION</a>
<a href="#">111</a>	29.85	21.61	3.05	2000	<a href="#">PHARMACOLOGY &amp; PHARMACY</a>	ARTICLE	ROBERTSON, TP <a href="#">et al.</a>	BRITISH JOURNAL OF PHARMACOLOGY	<a href="#">Inhibition of sustained hypoxic vasoconstriction by Y-27632 in isolated intrapulmonary arteries and perfused lung of the rat</a>
<a href="#">115</a>	45.57	32.30	3.29	2000	<a href="#">PHYSIOLOGY</a>	ARTICLE	ROBERTSON, TP <a href="#">et al.</a>	JOURNAL OF PHYSIOLOGY-LONDON	<a href="#">Voltage-independent calcium entry in hypoxic pulmonary vasoconstriction of intrapulmonary arteries of the rat</a>
<a href="#">60</a>	27.77		4.87	2006	<a href="#">PHYSIOLOGY</a>	PROCEEDINGS PAPER	AARONSON, PI <a href="#">et al.</a>	JOURNAL OF PHYSIOLOGY-LONDON	<a href="#">Hypoxic pulmonary vasoconstriction: mechanisms and controversies</a>
<a href="#">63</a>	23.75	19.43	7.47	2003	<a href="#">PHARMACOLOGY &amp; PHARMACY</a>	ARTICLE	SNETKOV, VA <a href="#">et al.</a>	BRITISH JOURNAL OF PHARMACOLOGY	<a href="#">Capacitative calcium entry as a pulmonary specific vasoconstrictor mechanism in small muscular arteries of the rat</a>
<a href="#">5</a>	0.35	0.67	8.47	2012	<a href="#">NEUROSCIENCES</a>	ARTICLE	LEMIERE, J <a href="#">et al.</a>	BRAIN RESEARCH	<a href="#">Brain activation to cues predicting inescapable delay in adolescent Attention Deficit/Hyperactivity Disorder: An fMRI pilot study</a>

## A. Our Research Excellence

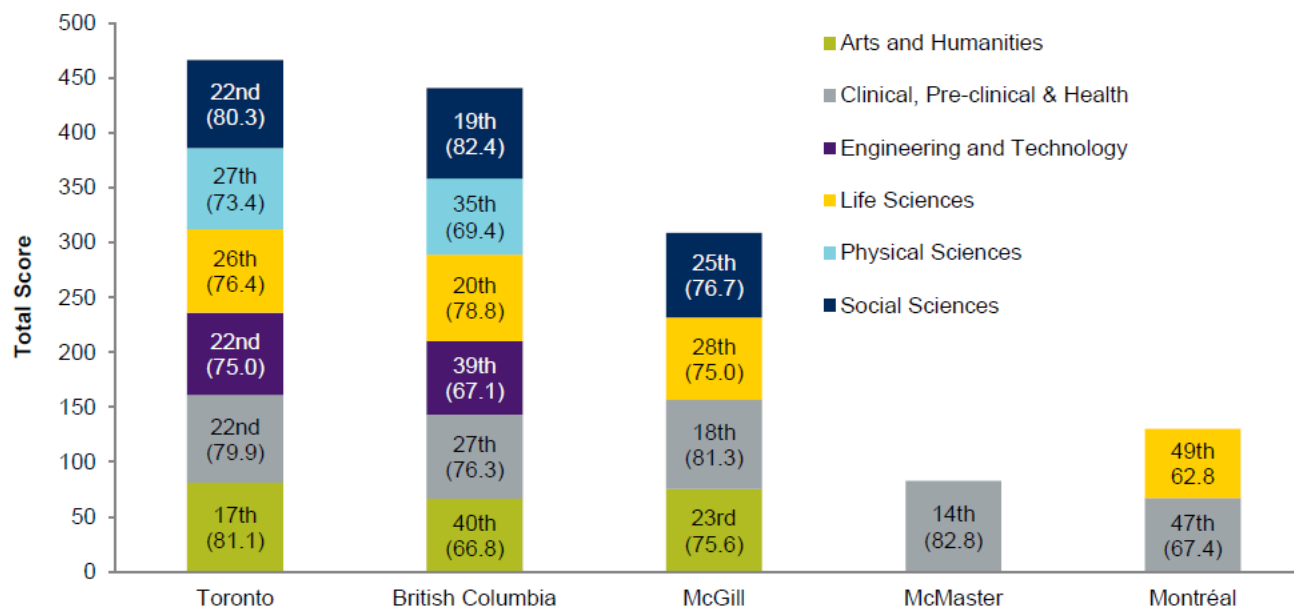
### 1. Rankings

#### Figures a-d

Figure A-1-d

### Times Higher Education World University Rankings by Discipline, 2012

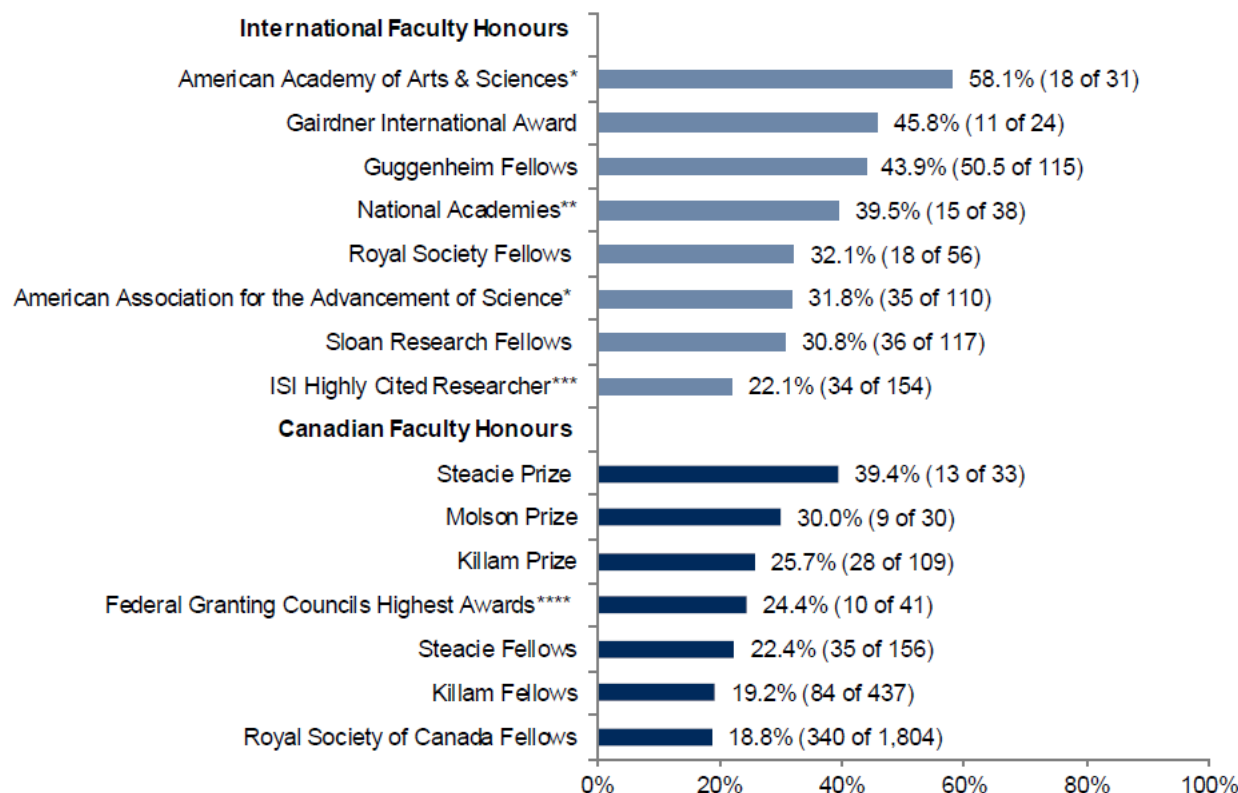
The chart below compares the University of Toronto's ranking relative to its Canadian peer institutions in the six disciplines identified in Times Higher Education World University Rankings.



Only includes Canadian Peers in the Top 50 for each discipline

## Faculty Honours by Award University of Toronto Compared to Other Canadian Universities, 1980-2012

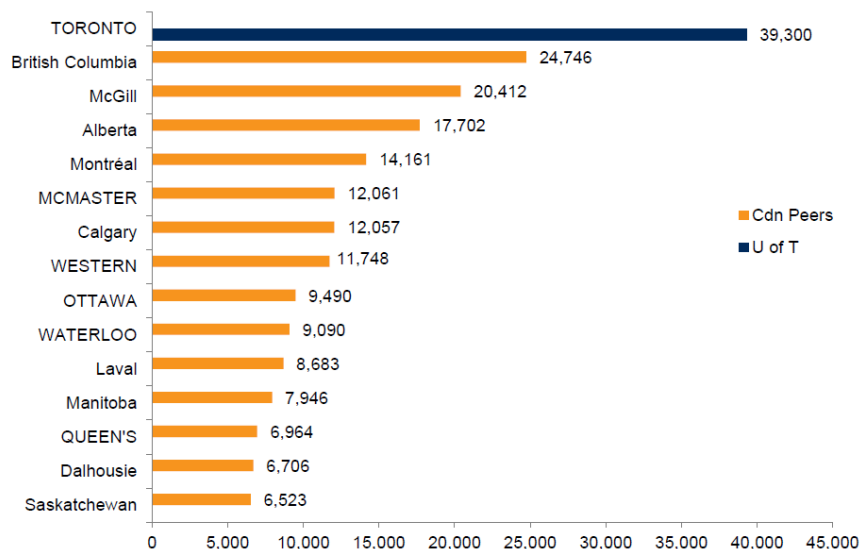
The chart below indicates the percentage of International Faculty Honours and Canadian Faculty Honours held by University of Toronto faculty as a percentage of the total amount of these awards held by faculty in Canada since 1980.



# CANADA

**All Science Fields**  
**Number of Publications Indexed by Thomson ISI**  
**University of Toronto compared to Canadian Peer Institutions, 2007-2011**

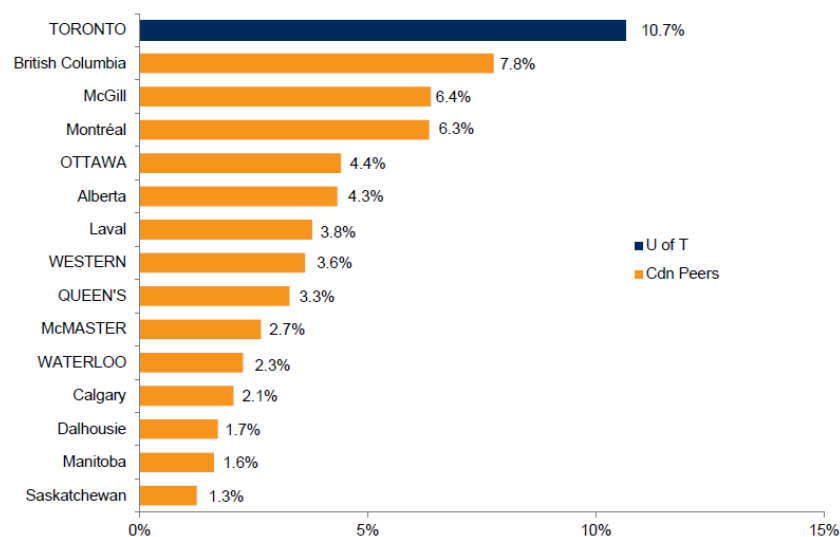
The chart below indicates the number of publications in the science fields by UofT faculty indexed by Thomson Incites compared to our Canadian peers.



InCites™, Thomson Reuters (2012). Report Created: Sep 14, 2012 Data Processed Dec 31, 2011  
 Data Source: Web of Science® This data is reproduced under a license from Thomson Reuters.  
 Our Ontario peer institutions are shown in capital letters.

**University of Toronto's Share of**  
**Social Sciences and Humanities Research Council (SSHRC) Funding**  
**Compared to Canadian Peer Universities, 2011-12**

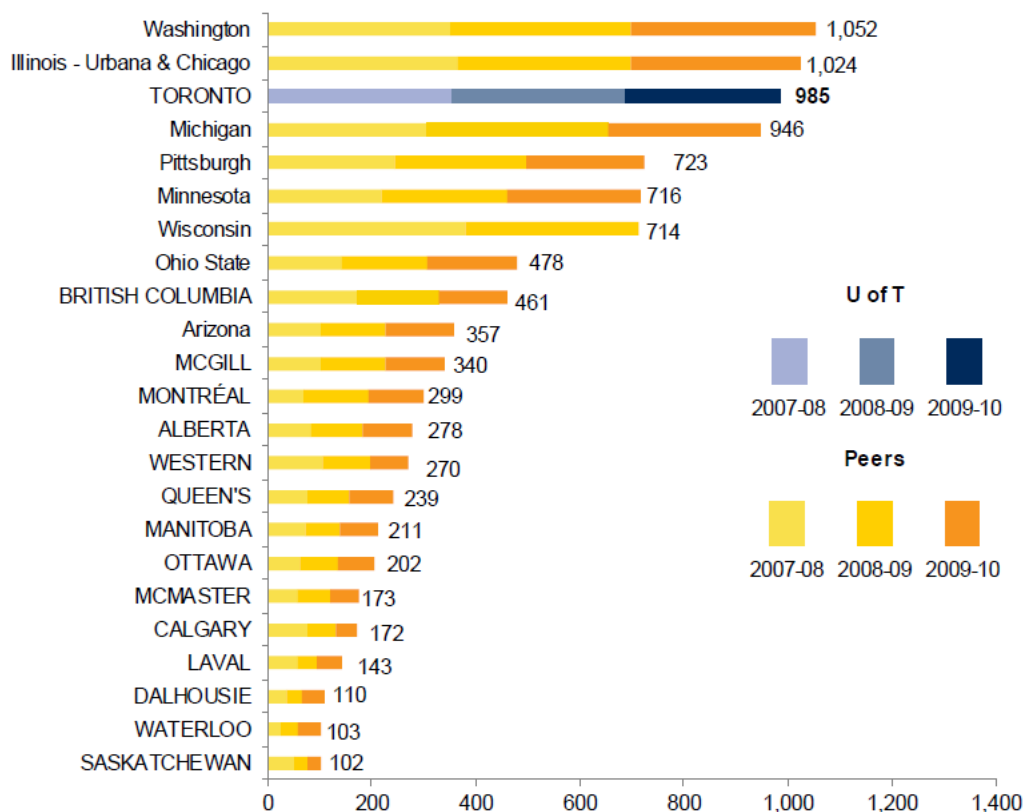
The chart below compares the University of Toronto's share of SSHRC funding to that of our Canadian peers.



Source: SSHRC Payments by Program Activity Architecture, Region, Province & Institution 2011-12 report.  
 Expenditures for Networks of Centres of Excellence nodes and the Canada Research Chairs are excluded.  
 For the national total, only expenditures to Canadian colleges and universities, and their affiliates, are counted.  
 Ontario peers are shown in capital letters.

## New Invention Disclosures Canadian and US Peers, 2007-08 to 2009-10

The chart below provides the three-year sum of new invention disclosures for Canadian and AAU peer institutions.

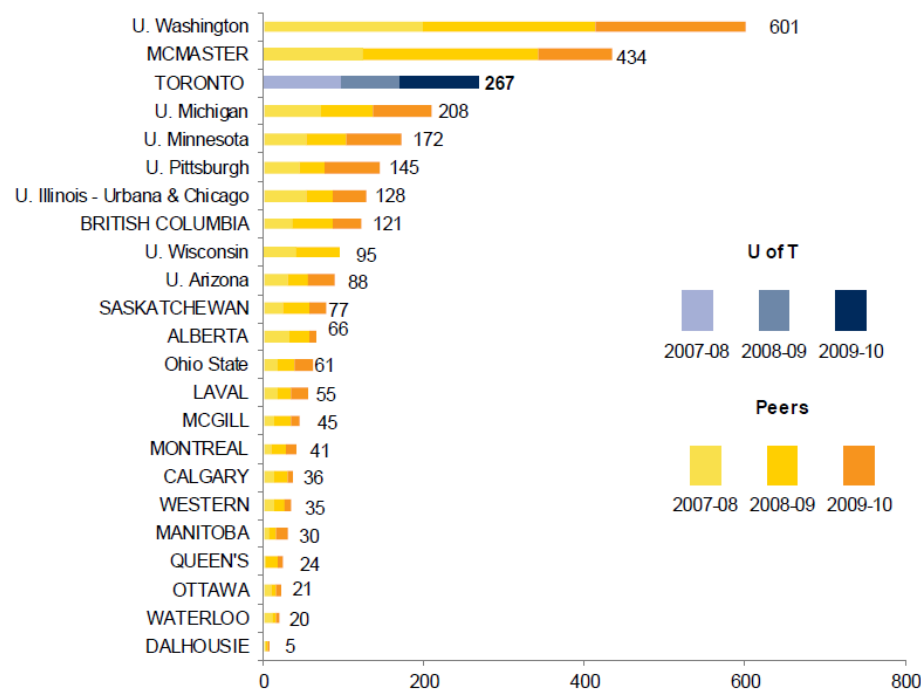


Data Source: Published AUTM Survey FY 2007, 2008, and AUTM STATT 3.0 FY2009. MaRS Innovation 2011.  
Summary Report on 'AUTM Compatible' Indicators FY2009.  
MaRS Innovation 2011 Summary Report on 'AUTM Compatible' Indicators FY2010.  
Note: Canadian peer institutions are shown in capital letters.

# CANADA

## New Licenses Canadian and US Peers, 2007-08 to 2009-10

The chart below provides the three-year sum of new licenses for Canadian and AAU peer institutions.



Data Source: Published AUTM Survey FY 2007, 2008, and AUTM STATT 3.0 FY2009.

MaRS Innovation 2011 Summary Report on 'AUTM Compatible' Indicators FY2009 2010. AUTM STATT 3.1

Note: Canadian peer institutions are shown in capital letters.

Where available, University of Toronto includes affiliate hospitals: Bloorview Kids Rehab, Centre for Addiction and Mental Health, Hospital for Sick Children, Sunnybrook Health Sciences Centre, and University Health Network.

British Columbia, Dalhousie, McGill, McMaster, Montreal, Ottawa, Waterloo and Western include affiliate institutions.

Washington includes Washington Research Foundation in all years.

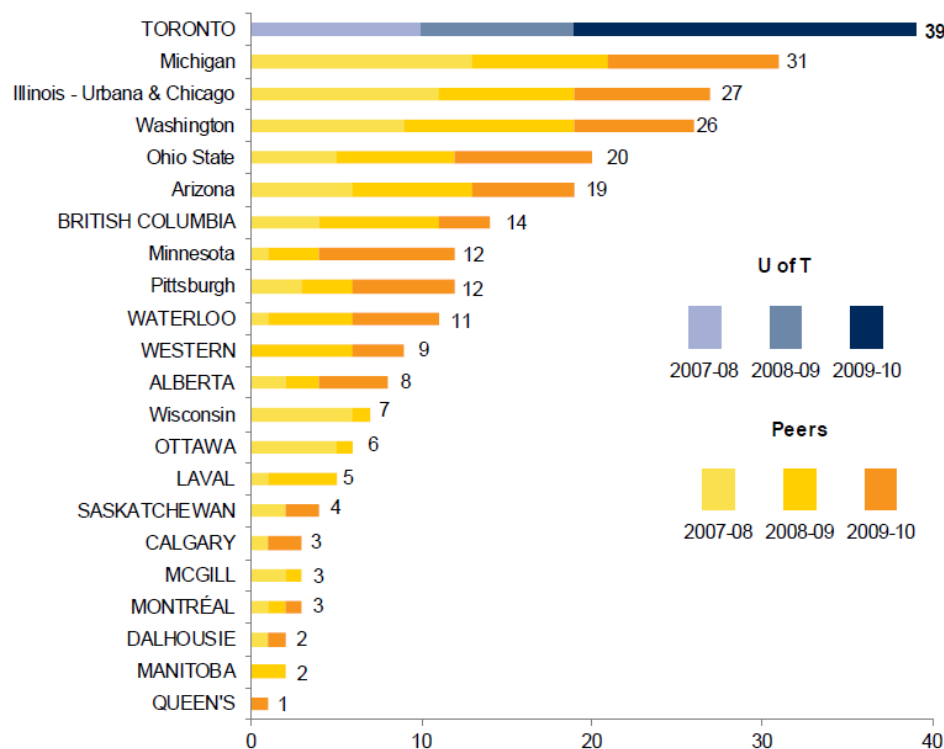
Wisconsin reported as W.A.R.F./ Univ. of Wisconsin Madison

Data for University of California at Berkeley only available as part of University of California system (not shown).

# CANADA

## New Spin-off Companies Canadian and US Peers, 2007-08 to 2009-10

The chart below provides the three-year sum of new spin-off companies for Canadian and AAU peer institutions.



Data Source: Published AUTM Survey FY 2007, 2008, and AUTM STATT 3.0 FY2009 2010. MaRS Innovation 2011

Summary Report on 'AUTM Compatible' Indicators FY2009 2010.

Note: Canadian peer institutions are shown in capital letters.

Where available, University of Toronto includes affiliate hospitals: Bloorview Kids Rehab, Centre for Addiction and Mental Health, Hospital for Sick Children, Sunnybrook Health Sciences Centre, and University Health Network.

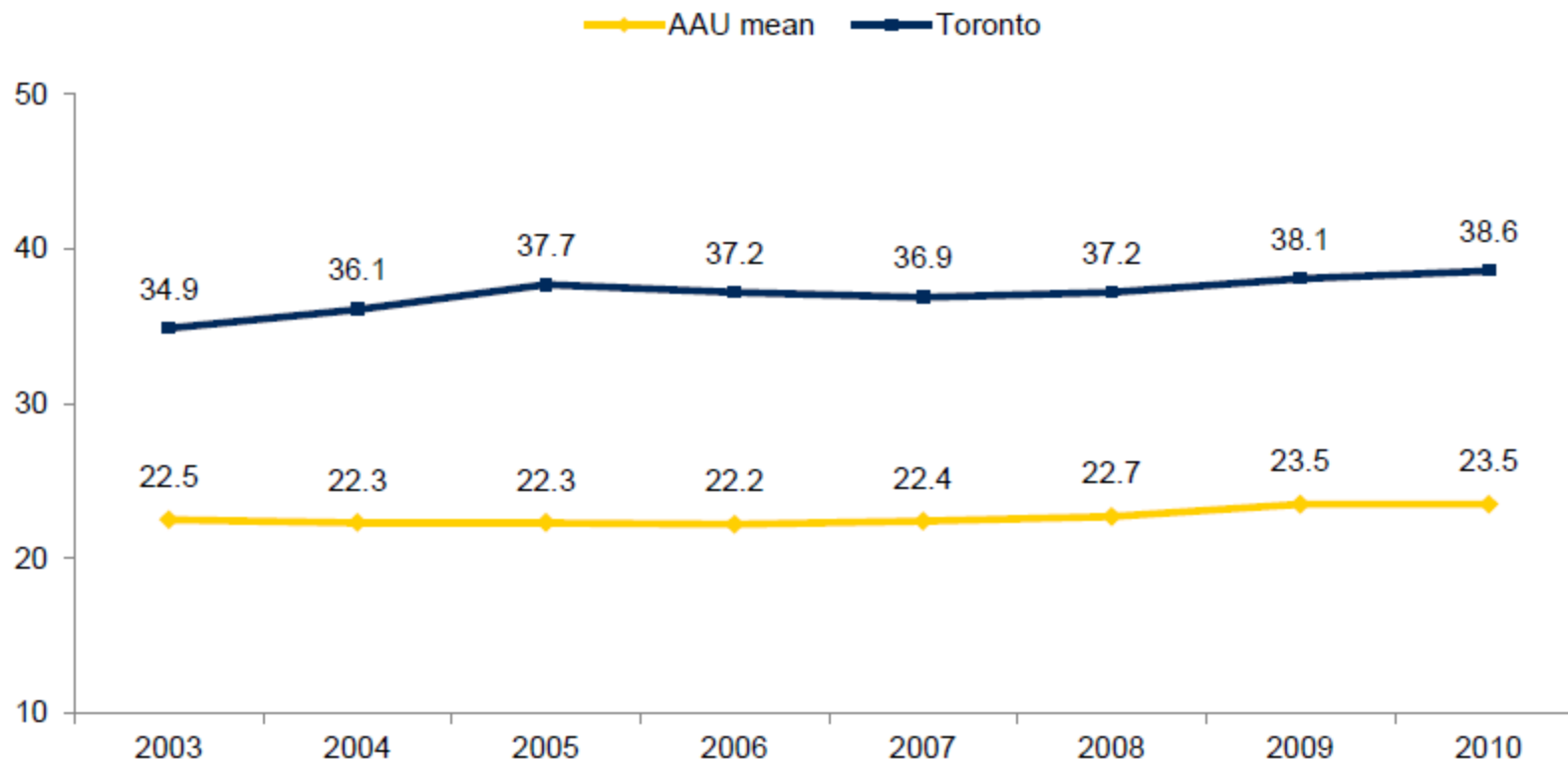
British Columbia, Dalhousie, McGill, McMaster, Montreal, Ottawa, Waterloo and Western include affiliate institutions.

Washington includes Washington Research Foundation in all years.

Wisconsin reported as W.A.R.F./ Univ. of Wisconsin Madison

# CANADA

## Student Faculty Ratios Comparison with Mean of AAU Peers Fall 2003 to 2009



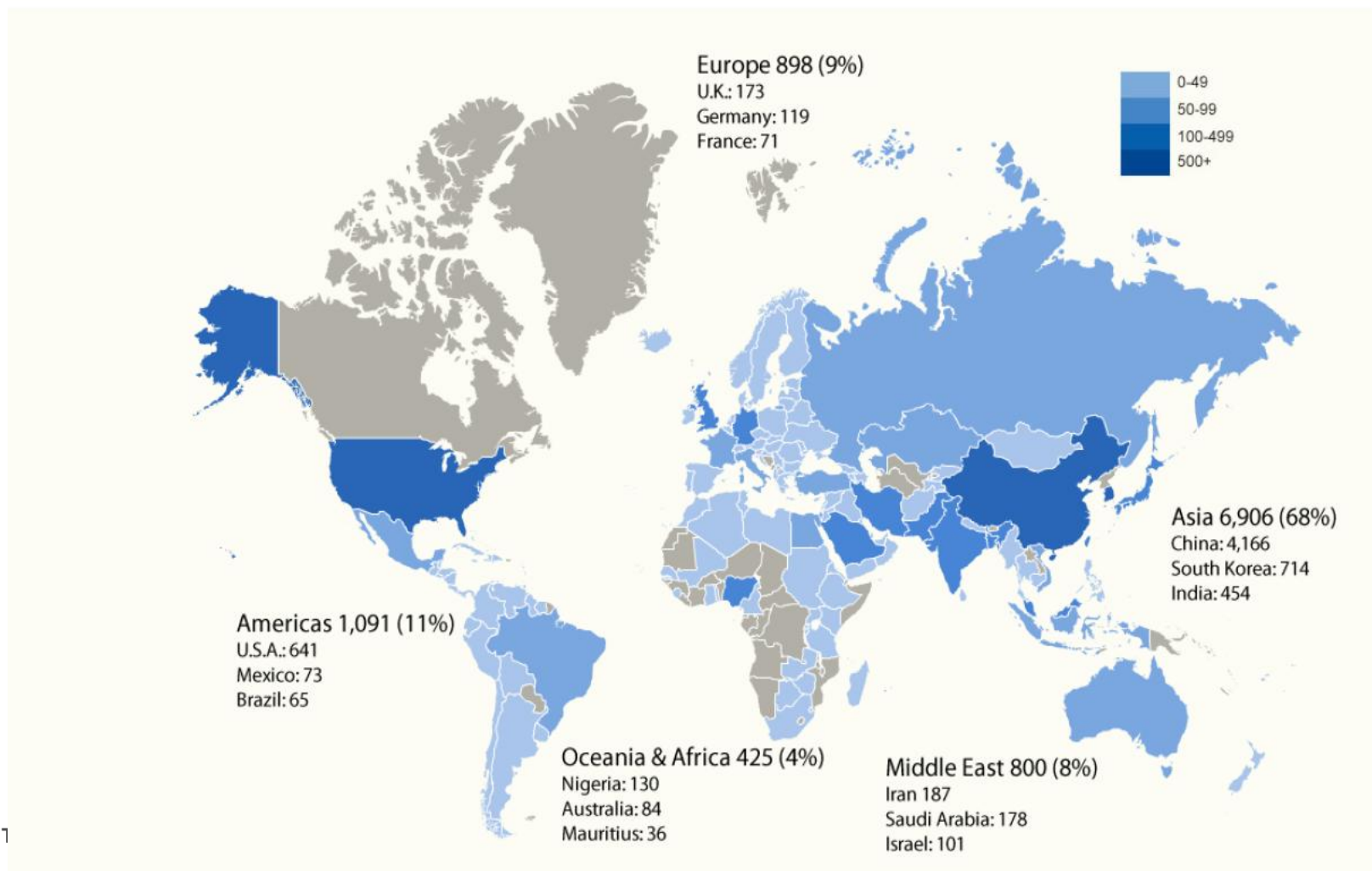
Source: Association of American Universities Data Exchange (AAUDE).





## International Student Enrolment by Geographic Origin, Fall 2011

The map provides an overview of the University's international students' countries of origin.



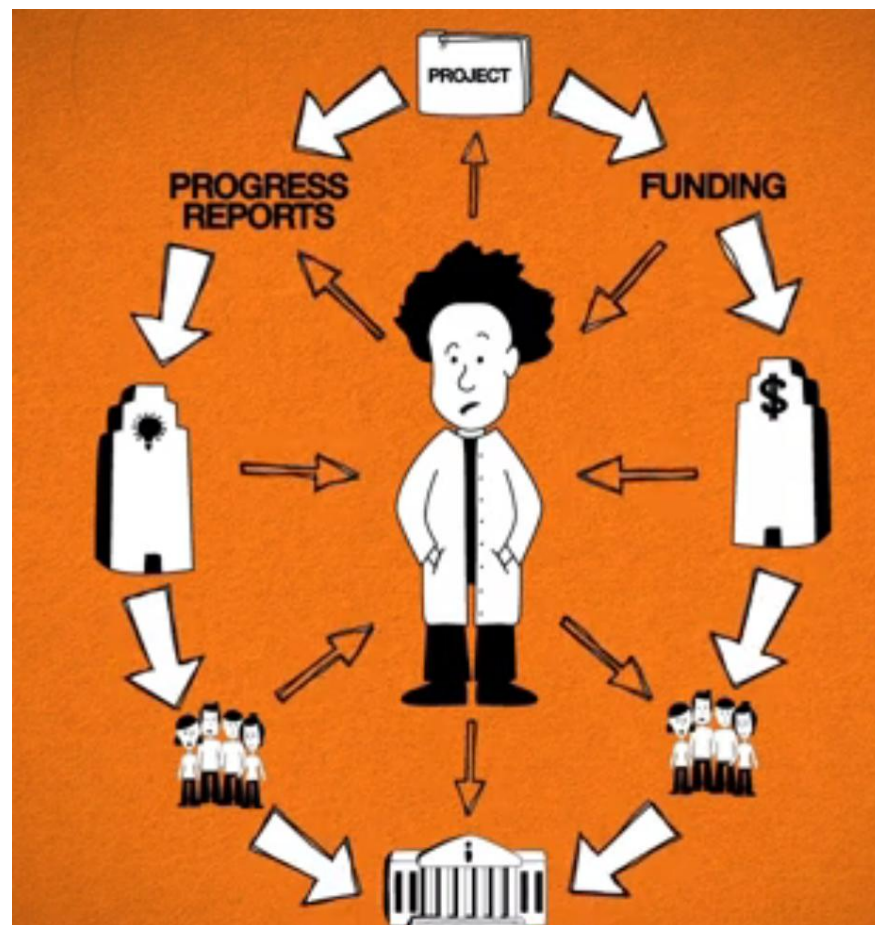
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The Consortia Advancing Standards in Research Administration Information (CASRAI) is a not-for-profit standards development organization. We provide a forum and the mechanisms required to standardize the data that researchers, their institutions and their funders must produce, store, exchange and process throughout the life-cycle of research activity. We envision research teams maintaining a single authoritative file on their activities and being able to quickly produce any documents needed by funders and institutions from this single source file.

The key benefits we want to realize for the research community are:

- Save time for researchers (applying & reporting)
- Improve access to quality data for institutions and funders
- Simplify the measurement of research impacts on society



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- Keep track of audit and reporting deadlines
- Include automatic reminders and offers
- Grant reporting
  - Success rates
  - Budget monitoring
  - Network graphs

- Support the complete Graduate Student Life Cycle, from initial admission of new graduate students, via structured study plans to graduation.
- Electronic approval processes, progress monitoring, automated alerts and graduate student management information reports

## Modules



### Graduate Students Management

CONVERIS supports the complete Graduate Student Life Cycle, from initial admission of new graduate students, via structured study plans to graduation. Features offered include electronic approval processes, progress monitoring, automated alerts and graduate student management information reports. [More](#)



# EUROPE CURRENT RESEARCH INFORMATION SYSTEM



The European Organisation for  
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    - CRIS 2004 - Antwerp
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  - MEMBERSHIP MEETINGS
  - WORKSHOPS
- TASK GROUPS
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  - Introduction to CERIF
  - Tutorial
  - Releases
- CRIS-IR
  - Work Plan

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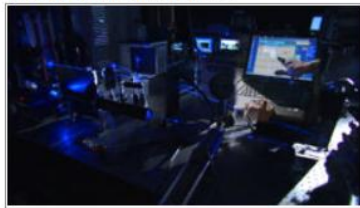
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Images from the projects:



The Excellence Initiative promotes outstanding research at German universities. Its objective: world-class science. We invite you to learn more about the initiative's projects: experience science in action by watching the 85 project films and reading up on the fascinating topics.



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Introductory video

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Bonn	Giessen	Lübeck	Würzburg
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DFG form 12.20 – 03/13

page 2 of 8

## I. Programme Information

### 1. Objective


As part of its Scientific Library Services and Information Systems Programme, the DFG funds projects at research institutions and other research service and information centres in Germany. The aim is to set up efficient nationwide research information systems.

Under this programme, the DFG funds the publication of research findings in open access journals, which enable access to the articles as soon as they have appeared. The funding frequently takes the form of publication fees ("author fees" or "article processing charges"). The programme enables research universities to obtain funding from the DFG which they can use to finance the publication fees charged by open access journals. The proposal can only be used to apply for publication funding. The ap-



# GERMANY

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Sort by: **Times Cited -- highest to lowest**

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1. **The CLUSTAL\_X windows interface: flexible strategies for multiple sequence alignment aided by quality analysis tools**  
By: Thompson, JD; Gibson, TJ; Plewniak, F; et al.  
NUCLEIC ACIDS RESEARCH Volume: 25 Issue: 24 Pages: 4876-4882 Published: DEC 15 1997  
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**Times Cited: 23,061**  
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2. **A new mathematical model for relative quantification in real-time RT-PCR**  
By: Pfaffl, MW  
NUCLEIC ACIDS RESEARCH Volume: 29 Issue: 9 Article Number: e45 Published: MAY 1 2001  
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**Times Cited: 6,985**  
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3. **ARB: a software environment for sequence data**  
By: Ludwig, W; Strunk, O; Westram, R; et al.  
NUCLEIC ACIDS RESEARCH Volume: 32 Issue: 4 Pages: 1363-1371 Published: FEB 2004  
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**Times Cited: 3,189**  
(from Web of Science Core Collection)

4. **Multiple sequence alignment with the Clustal series of programs**  
By: Chenna, R; Sugawara, H; Koike, T; et al.  
NUCLEIC ACIDS RESEARCH Volume: 31 Issue: 13 Pages: 3497-3500 Published: JUL 1 2003  
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**Times Cited: 2,719**  
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5. **Relative expression software tool (REST (all) for group wise comparison and statistical analysis of**

**Times Cited: 2,324**

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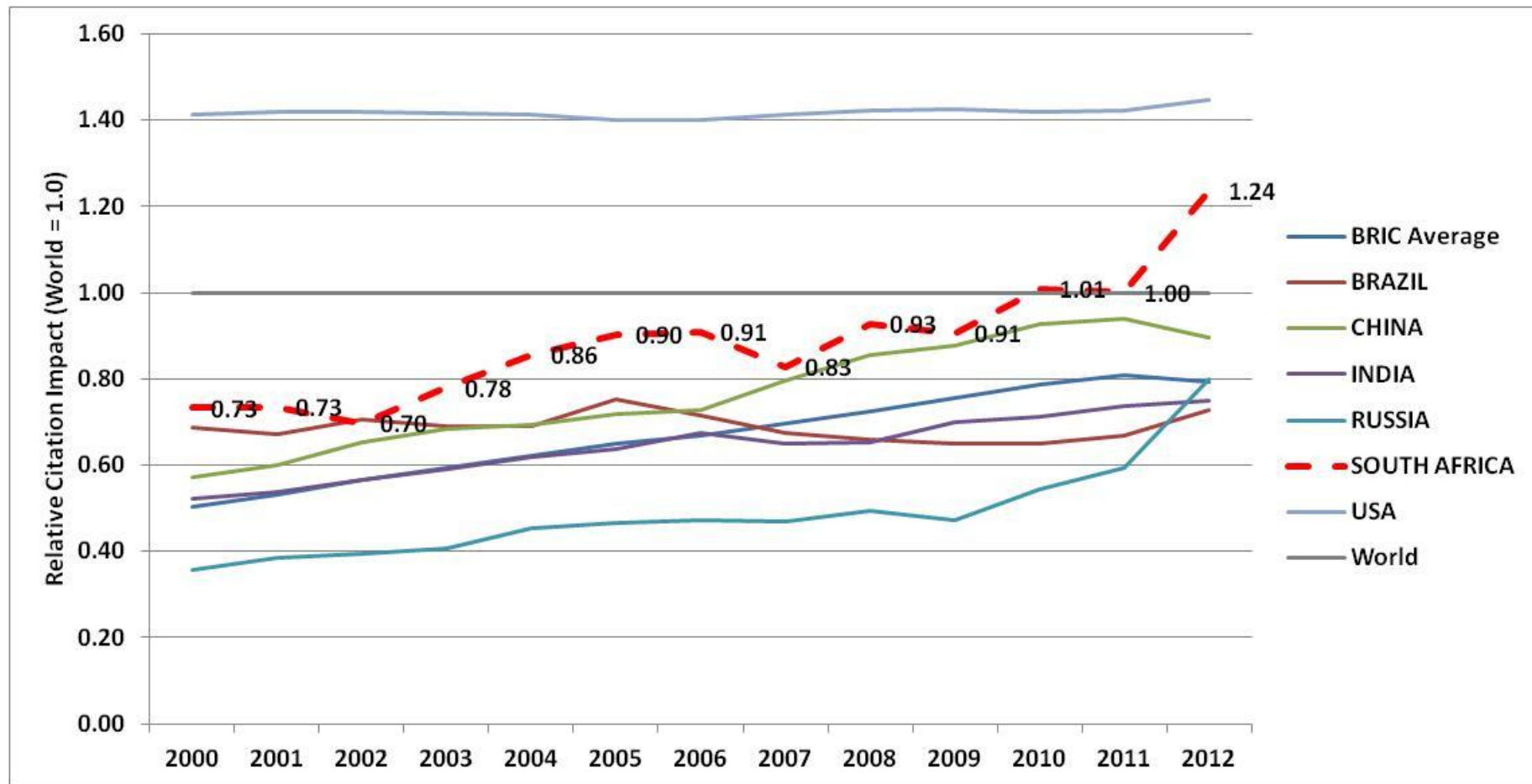
# SOUTH AFRICA

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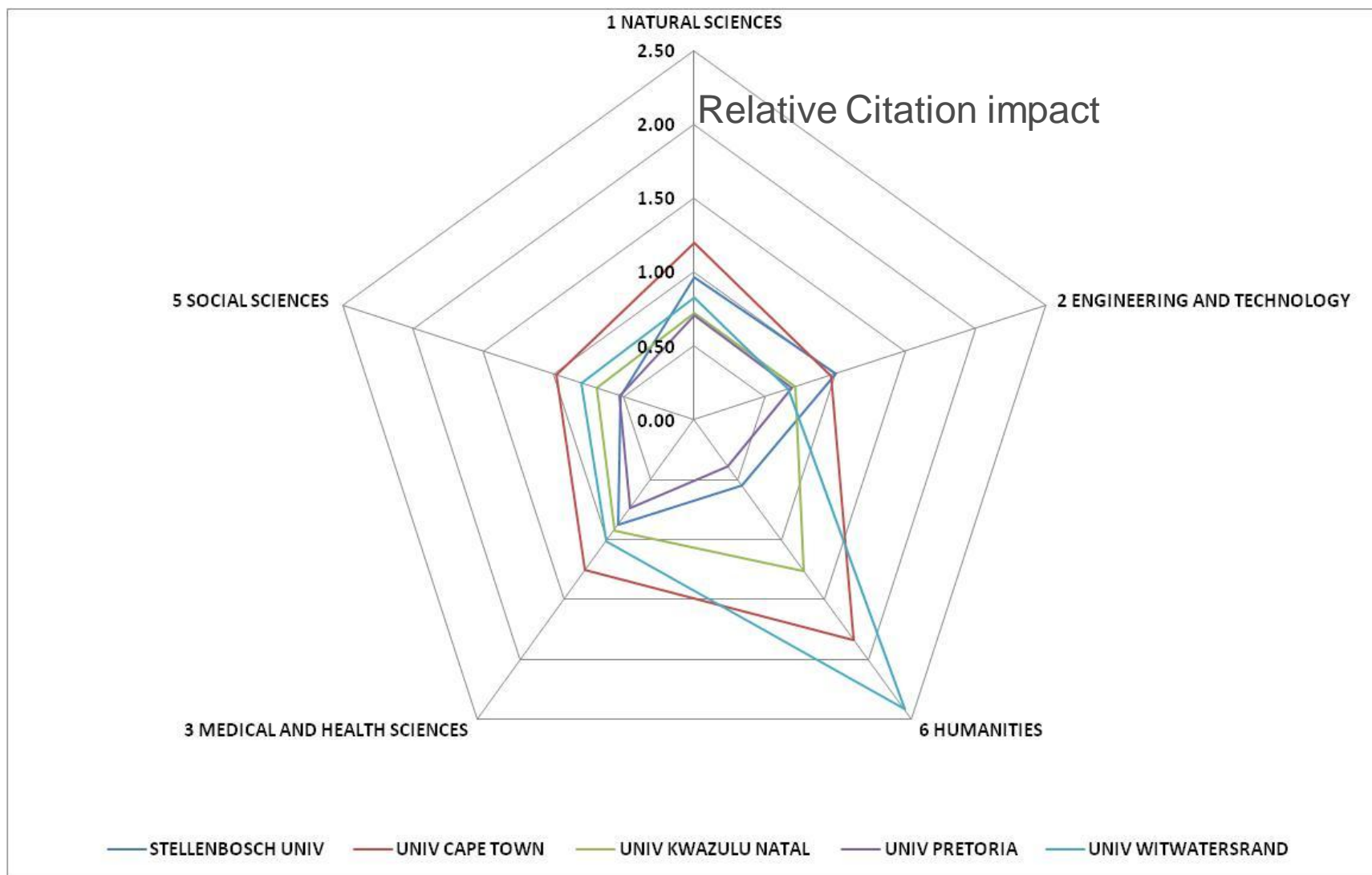
- Comparison of national research performance against BRIC countries and high performers
- Evaluation of research performance of South African Higher Education Institutions against each other and against global benchmarks
- Rating individual researchers
- Analysing globalisation of South African journals



# COMPARISON OF OVERALL RESEARCH PERFORMANCE



# SOUTH AFRICAN INSTITUTIONAL PERFORMANCE



# SOUTH AFRICA – RATING INDIVIDUAL RESEARCHERS



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#### » **Rated researchers**

**Date: 2013-12-12**

The rating of individuals is based primarily on the quality and impact of their research outputs over the past eight years, taking into consideration the evaluation made by local and international peers.

#### » **Evaluation and Rating of Individual Researchers**

**Date: 2013-12-12**

The NRF rating system is a key driver in the NRF's aim to build a globally competitive science system in South Africa. It is a valuable tool for benchmarking the quality of our researchers against the best in the world. NRF ratings are allocated based on a researcher's recent research outputs and impact as perceived by international peer reviewers. The rating system encourages researchers to publish high quality outputs in high impact journals/outlets. Rated researchers as supervisors will impart cutting-edge skills to the next generation of researchers.

#### » **Project: Evaluation and Rating Data (PERD)**

**Date: 2011-03-31**

The NRF uses the evaluation and rating system as a mechanism to nurture scholarship and grow the country's research

# SOUTH AFRICA

